

**REMARKS**

The Office Action mailed April 3, 2006 has been received and reviewed. Claims 1-20 are currently pending in the application. Claims 1-20 stand rejected. Claims 1, 5-8, 10 and 12 are amended herein. Claim 4 is cancelled herein. Amendments have been made without prejudice or disclaimer. No new matter has been added. Reconsideration is respectfully requested.

**Claim Rejections—35 U.S.C. § 112, first paragraph**

Claims 1-20 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey to one of skill in the art that the inventor has possession of the claimed invention at the time of filing. Claim 4 has been cancelled herein mooted the objection to this claim.

More particularly, the Examiner states that the specification mentions arginine, lysine, methionine, cysteine, threonine, and tryptophan. However, the Examiner alleges that it is unclear which of these ingredients the animal feed actually comprises and their amounts.

Possession of the claimed invention may be shown by describing the elements of the claimed invention by using descriptive words, structures, figures, diagrams and formulas. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572, 19 USPQ2d 1961, 1966 (Fed. Cir. 1997). Applicant respectfully submits that the elements of the claimed invention are described in such descriptive terms as to reasonably convey to one of skill in the art that the inventor had possession of the invention at the time of filing.

Independent claims 1 and 10, recite, in part, that the animal feed comprises arginine, methionine, cysteine, threonine, and tryptophan in amounts relative to the amount of lysine in the feed. On page 5, lines 12-13, of the published international application, the specification states, “[p]referably, the total amount of lysine in the feed for gestating sows is below 0.8 wt.%, more preferably in the range of 0.5 to 0.75 wt %.” On page 4, line 27 through page 5, line 4, the specification discloses an animal feed which may contain arginine in such an amount that the total arginine/lysine (w/w) content is higher than 1.5, preferably higher than 1.75, preferably higher than 2.0, more preferably higher than 2.25. Furthermore, the claims themselves recite the ingredients the animal feed comprises and the relative amounts.

As such, the specification provides descriptive words and figures and formulas including

the amounts of ingredients of the animal feed.

For the foregoing reasons, it is requested that the rejection of claims 1-3 and 5-20 under 35 U.S.C. § 112, first paragraph, be removed.

**Claim Rejections—35 U.S.C. § 112, second paragraph**

Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 has been cancelled herein mooted the objection to this claim.

While the applicant does not agree with the alleged indefiniteness, the claims have been amended according to the Examiner's suggestions. As such, the claim amendments should remove any alleged indefiniteness.

More particularly, independent claim 1, as amended, recites, in part, a feed including an amount of lysine and the following amino acids in an amount relative to the amount of lysine (w/w) in the following ranges: total methionine + cysteine: >0.55; threonine: >0.60; tryptophan >0.15; and arginine >1.5, wherein a daily dosage of at least 200 mg arginine per kg body of the gestating animal (kgbw) is provided upon feeding. Independent claim 10, as amended, recites, in part, an animal feed being enriched in arginine such that a daily dosage of at least 200 mg arginine per kg body weight of the gestating animal is provided upon feeding, which animal feed includes an amount of lysine and the following amino acids in an amount relative to lysine (w/w) in the following ranges: total methionine + cysteine: >0.55; threonine: >0.60; and tryptophan: >0.15.

As such, the applicant respectfully submits that claims 1-3 and 5-20 particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Therefore, it is requested that the rejection of claims 1-3 and 5-20 under 35 U.S.C. § 112, second paragraph, be removed.

**Claim Objections**

Claims 4, 5, 7 and 8 allegedly contain insufficient antecedent basis for recited elements of the claims. Claim 4 has been cancelled herein mooted the objection to this claim. Applicant has

amended claim 5, 7 and 8 to remove any alleged lack of antecedent basis.

**Claim rejections—35 U.S.C. § 103(a)**

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wilson *et al.* (US 2002/0051844 A1) in view of Mahan “Digestibility of soybean meals collected at four periods from a soybean processor (Cargill) in Ohio”. Claim 4 has been cancelled herein mooted the objection to this claim. Applicant respectfully traverses the remaining rejection for the following reasons.

To establish and maintain a *prima facie* case of obviousness under 35 U.S.C. § 103, M.P.E.P. § 706.02(j) states that, first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim elements.

The Examiner asserts that Wilson *et al.* teach animal feed compositions and methods for increasing the reproductive performance of breeding populations of swine. The compositions of Wilson *et al.* comprise  $\omega$ -3-fatty acids. These may be added to a random animal feed, such as soybean meal. As optional ingredients, Wilson *et al.* mention lysine, methionine, arginine, threonine, tryptophan and cysteine.

However, Wilson *et al.* is directed to the effect of  $\omega$ -3-fatty acids and does not suggest the effect of arginine on the reproductive performance of swine. Furthermore, Wilson *et al.* do not mention specific amounts or relative of amino acids in the animal feed. As such, Wilson *et al.* do not teach or suggest each and every element of claims 1-3 and 5-20.

In regard to Mahan, Table 2 of Mahan illustrates the composition of soybean meal as including 3.56% arginine, 2.97 % lysine, 0.65% methionine, 0.76% cysteine, 1.83% threonine and 1.70% tryptophan. Relative to the amount of lysine, this gives a total amount of methionine and cysteine of less than 0.55 ( $0.65 + 0.76/2.97 = 0.47$ ). The weight ratio between arginine and lysine is lower than 1.5 ( $(3.56/2.97 = 1.20)$ ). As such, Mahan does not teach or suggest all the elements of claims 1-3 and 5-20.

Furthermore, Wilson *et al.* and Mahan, either alone or in combination, do not provide any

suggestion or motivation to modify or combine references. Also, the specification cites a report from the National Research Council (NRC) on page 3, lines 9-21, which states that swine during pregnancy synthesize all the necessary arginine. According to the report, excessive supplements of arginine are undesirable as it can reduce feed intake and reduce growth. As such, one of ordinary skill in the art would not have a reasonable expectation of success by increasing the arginine content of the feed.

Accordingly, a *prima facie* case of obviousness cannot be established because the cited references do not alone, or in combination, teach or suggest each and every element of any of claims 1-3 and 5-20. Moreover, the applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the cited references and, in light of the NRC report, one of ordinary skill in the art would have been led away from combining the cited references.

Therefore, it is requested that the rejection of claims 1-3 and 5-20 under 35 U.S.C. § 103(a) be removed.

#### CONCLUSION

In view of the foregoing amendments and remarks, the applicant submits that the claims define patentable subject matter and a notice of allowance is requested. Should questions exist after consideration of the foregoing, the Office is kindly requested to contact the applicant's attorney at the address or telephone number given herein.

Respectfully submitted,



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